



Medicare Priorities

- ACUTE MYOCARDIAL INFARCTION
- BREAST CANCER
- DIABETES
- HEART FAILURE
- PNEUMONIA
- STROKE
- REDUCING HEALTH CARE DISPARITIES

***Health Care
Quality
Improvement
Program***



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Medicare's Health Care Quality Improvement Program

Partnerships for Improvement

In 1992, the Health Care Financing Administration and its contractors, Peer Review Organizations (PROs), initiated the Health Care Quality Improvement Program (HCQIP), a new approach to improve the health of Medicare beneficiaries. HCQIP involves analyzing and changing the patterns of care to remedy widespread shortcomings in the health care system. Collaboration is critical to the success of HCQIP. It represents an historic opportunity to partner with practitioners, beneficiaries, providers, plans, and other purchasers to:

- Develop quality indicators firmly based in science;
- Identify opportunities to improve care, through careful measurement of care patterns;
- Communicate with professional and provider communities about these patterns of care;
- Intervene to foster quality improvement through system improvements; and
- Remeasure to evaluate success and redirect efforts.

National Priorities

HCFA launched HCQIP in 1992 with a national quality improvement project on acute myocardial infarction, the Cooperative Cardiovascular Project. HCFA has expanded its national quality improvement activities and now is focusing on six clinical priority areas:

1. Acute Myocardial Infarction;
2. Breast Cancer;
3. Diabetes;
4. Heart Failure;
5. Pneumonia; and
6. Stroke.

As a seventh national priority, HCFA and PROs also are committed to reducing health disparities within the Medicare population. For example, compared to the population overall, African-American Medicare beneficiaries receive fewer important preventive services, such as mammography and influenza vaccinations. HCFA and PROs are working to narrow these gaps.

HCFA chose these national priorities based on their public health importance and the feasibility of measuring and improving quality. All are important causes of morbidity and mortality among the Medicare population and the U.S. population as a whole and account for substantial numbers of hospitalizations and health care costs. To ensure that HCQIP efforts will truly improve health, the quality

Health Care Quality Improvement Program



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National Priorities (continued)

indicators for these clinical conditions are firmly based in science. For most of these clinical areas, successful local or regional projects undertaken by PROs in collaboration with providers indicate that quality improvement is an attainable goal.

Other PRO Priorities

In addition to these national priorities, PROs will pursue three other types of HCQIP projects. The first focuses on important topics at the state or local level; the second focuses on the care provided in alternate settings, such as nursing homes, dialysis facilities, home health agencies, or physicians' offices; and the third focuses on managed care. HCFA requires PROs to offer technical assistance and collaboration on quality improvement projects to every Medicare+Choice plan in their states. The type of assistance PROs can provide includes, but is not limited to, clinical and biostatistical expertise, assistance in designing and conducting quality projects, review and analysis of project findings, interventions, and advice on data collection.

HCFA and PRO Accountability

For the first time since the PRO program's inception more than two decades ago, HCFA has developed performance-based contracts with PROs to improve patient outcomes nationwide. (HCFA will evaluate PROs on improvements in quality indicator rates during the three-year contract period.) These improvements can only be accomplished through collaboration with health care professionals and providers. The success of this national effort, as well as PRO success on the state level, hinge on fostering successful partnerships to improve care for patients.

HCFA also is accountable for performance improvement under the Government Performance and Results Act (GPRA). HCFA has adopted a number of performance goals. Some of these goals apply to the national topics.

These include:

1. reducing one-year mortality following hospitalization for acute myocardial infarction;
 2. increasing mammography rates; and
 3. increasing flu and pneumococcal vaccination rates.
- HCFA and PROs must rely on each other to meet these goals.

Benefits to Collaborating Providers

PROs provide quality improvement consultation to health care professionals, hospitals, physician practices, managed care organizations, and others. This includes:

- widely-accepted quality indicators and data collection instruments;
- analysis and feedback of national- and state-level data about patterns of care;
- effective quality improvement strategies and expertise;
- pre-tested educational materials for providers and patients;
- a forum for collaboration among providers, payers, and others to improve care and increase the value of health care expenditures; and
- custom assistance on local quality improvement activities.

HCFA funds the PROs to conduct this work to improve the health of Medicare beneficiaries. The PROs employ physicians, nurses, health care quality professionals, epidemiologists, statisticians, and communication experts, and do not charge partners or collaborators for their services.

Health care professionals, providers, and national and local organizations are encouraged to adopt Medicare's Health Care Quality Improvement Program priorities and to work with the PROs to foster improvement activities to improve care for all patients, regardless of age, payor or setting of care. Providers will achieve a higher quality of care and improve outcomes for individuals across the nation by working in partnership with HCFA and the PROs.

Acute Myocardial Infarction National Project Overview

Over 300,000 Medicare patients are hospitalized for heart attack (acute myocardial infarction) each year. Many do not receive important therapies that are known to be beneficial. The National Acute Myocardial Infarction Project focuses on strengthening appropriate care processes to improve patient outcomes. The goal is to lower the one-year mortality rate for Medicare beneficiaries following hospital admission for heart attack.



Public Health Importance

Cardiovascular disease is America's biggest killer. Every minute an American dies of coronary heart disease. Each year approximately 1.1 million people experience an acute myocardial infarction (AMI) or heart attack. Almost two-thirds of heart attack patients do not make a complete recovery and people who survive the acute phase have a chance of related illness and death that is 2 to 9 times higher than that of the general population. One third dies during the acute phase. Older Americans bear the brunt of this medical burden. Over 80 percent of all heart attack related deaths occur in individuals age 65 or older.¹

Heart disease is the leading cause of hospitalization among persons age 65 or older. Acute myocardial infarction accounts for approximately 394,850 hospitalizations for Medicare beneficiaries, or about 12 hospitalizations for every 1,000 enrollees. The payments to hospitals for these episodes totaled over \$3.6 billion, or about \$9,780 per discharge, in 1996.²

Main Objective

To lower the one-year mortality rate for Medicare beneficiaries following hospital admission for AMI. Specifically, to decrease the one-year mortality from 31.4 percent (based on hospital admissions for heart attack from August 1995 to July 1996) to 27.4 percent over 5 years. This represents a decrease of 1 percentage point more than the background trend.

Process Objectives

To increase the use of the following care processes for patients hospitalized with AMI:

- Early administration of aspirin
- Early administration of beta-blocker
- Timely initiation of reperfusion therapy (using a thrombolytic agent or angioplasty)
- Aspirin prescribed at discharge

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AMI Quality Indicators

<i>Quality Indicators</i>	<i>Criterion Met or Acceptable Alternative*</i>
1. Early administration of aspirin	1. Within 24 hours of hospital arrival
2. Early administration of beta-blocker	2. Within 24 hours of hospital arrival
3. Timely reperfusion	3. Interval from time of arrival to initiation of thrombolysis or primary angioplasty
4. Aspirin at discharge	4. Evidence of prescription upon hospital discharge
5. Beta-blocker at discharge	5. Evidence of prescription upon hospital discharge
6. ACE inhibitor at discharge for low LVEF	6. Evidence of prescription upon hospital discharge
7. Smoking cessation counseling	7. Documentation of counseling in medical record
<i>Test Indicators</i>	<i>Criterion Met or Acceptable Alternative</i>
1. Administration of reperfusion therapy	1. Receipt of thrombolysis or primary angioplasty
2. Early administration of ACE inhibitor	2. <i>Under development</i>
3. Cholesterol status assessment and management	3. <i>Under development</i>
4. Dietary counseling	4. <i>Under development</i>

*Excludes patients with contraindications

Process Objectives (continued)

- Beta-blocker prescribed at discharge
- Angiotensin-converting enzyme (ACE) inhibitor prescribed at discharge if left ventricular ejection fraction (LVEF) is impaired
- Smoking cessation counseling during hospitalization.

The project also considers other care processes that may decrease mortality after AMI (e.g., early administration of ACE inhibitor, management of hypercholesterolemia); quality indicators are being developed for use in quality improvement efforts.

Clinical Background

Clinical Trials

Multiple clinical trials have demonstrated the efficacy of aspirin, beta-blockers, early reperfusion, and ACE inhibitors for appropriate patients with AMI. For example, in the Second International Study of Infarct Survival (ISIS-2), the early use of aspirin for patients with an evolving myocardial infarction was associated with a 23 percent reduction in short-term mortality.³ Long-term use of aspirin after an AMI reduces vascular mortality by 13 percent, non-fatal myocardial infarction by 31 percent, and

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Clinical Background (continued)

nonfatal stroke by 42 percent, according to a meta-analysis.⁴

The early use of beta-blockers reduced short-term mortality from 4.3 to 3.7 percent in the First International Study of Infarct Survival and from 4.9 to 4.3 percent in the Metoprolol in Acute Myocardial Infarction (MIAMI) trial.⁴ Long-term use of beta-blockers after an AMI reduces mortality by 23 percent, according to a meta-analysis.⁵

The use of thrombolytic therapy or primary coronary angioplasty in appropriate patients has been shown to reduce mortality. Earlier treatment improves survival. A benefit of 23 lives saved per 1,000 treated with thrombolytic therapy per hour of earlier treatment has been described.⁶ Similarly, in patients treated with primary angioplasty during the first several hours after onset of symptoms, the survival benefit depends on time to reperfusion.⁷

ACE inhibitors, given long-term after an AMI, have been shown to reduce mortality in patients with impaired contractility of the left ventricle. A 20 percent reduction was found in the Survival and Ventricular Enlargement (SAVE) trial, 27 percent reduction in the Acute Infarction Ramipril Efficacy (AIRE) trial, and 22 percent reduction in the Trandolapril Cardiac Evaluation (TRACE) trial.⁴ Smoking cessation after AMI decreases mortality. Patients who continue to smoke have a mortality rate that is 1.33 to 2.55 times that of patients who quit.⁸

Clinical Guidelines

The American College of Cardiology and American Heart Association summarized the scientific evidence and published clinical guidelines for the management of AMI in 1996⁴ and an update in 1999⁹. The process objectives for HCFA's AMI national project are consistent with recommendations in these guidelines. The quality indicators are not clinical guidelines, but adapt information from the guidelines in order to measure performance.

Opportunity for Improvement

In 1992, HCFA initiated the Cooperative Cardiovascular Project, a quality improvement project focusing on AMI in the Medicare population.¹⁰ The project began as a pilot initiative in 4 states and was subsequently expanded nationally. Data from the Cooperative Cardiovascular Project show that substantial opportunity for improvement in AMI care exists.

As part of the pilot project, time from a patient's arrival at the hospital to initiation of reperfusion therapy using a thrombolytic agent was determined. In 1995, the median time was 41 minutes, and 30 percent received the therapy within 30 minutes.¹¹ American College of Cardiology and American Heart Association guidelines recommend a goal of less than 30 minutes.⁴ In the national project, quality indicator rates were determined for Medicare beneficiaries hospitalized during an approximate 8 month period in 1994 to 1995. Selected quality indicator rates are shown below.¹² Average rates are listed, however, substantial geographic variation exists.^{12,13} Patients with contraindications for the therapy are omitted from the analysis. Thus, all patients in the analysis are considered ideal candidates for the therapy, and the target rate for the indicator is 100 percent.

The results indicate that these therapies are substantially underutilized:

- Aspirin administered during the hospital stay, 86 percent
- Aspirin prescribed at discharge from the hospital, 78 percent
- Beta-blocker prescribed at discharge, 50 percent
- ACE inhibitor prescribed at discharge, 59 percent
- Smoking cessation advice given during hospitalization, 42 percent

Increased use of these therapies is associated with improved survival.^{11,14} Thus, increased use nationally could potentially save many lives. Achievement of the target objective (of decreasing 1-year mortality to 27.4 percent) would result in approximately 3,000 lives saved per year.

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Breast Cancer National Project Overview

Breast cancer affects 1 in 8 American women, and the risk of breast cancer continues to increase as women age. Therefore, female Medicare beneficiaries are at particular risk. Periodic screening mammography has been shown to save lives by detecting breast cancer early, when it is most treatable. Yet, this important screening test is underutilized. The National Breast Cancer Project focuses on increasing regular breast cancer screening, particularly mammograms.



Public Health Importance

Breast cancer is the leading cause of cancer incidence and the second leading cause of cancer death for women in the United States, with an estimated 175,000 new cases and 43,700 deaths expected to occur in 1999.¹ Current estimates are that one in eight women will develop breast cancer in her lifetime.

Breast cancer and associated comorbidities and mortalities become more prevalent with increasing age, and more than half of breast cancers occur in women 65 years and older. The annual risk of developing breast cancer is approximately one in 3,700 for women aged 30-34, which increases to 1 in 235 for women aged 70-74.² The age-specific incidence rates of invasive breast cancer have risen between 2 and 5 percent annually during the last two decades, although death rates have remained relatively stable.^{3,4}

Risk factors for breast cancer include age, family history, early menarche (aged 12 years or younger), late menopause (aged 55 or older), late age at first pregnancy (aged

30 years or older) or nulliparous, diet, and alcohol consumption.⁵

Main Objective

To reduce the incidence of late-stage breast cancer among female Medicare beneficiaries.

Process Objective

To increase the mammography utilization rate among female Medicare beneficiaries.

Clinical Background

Evidence for mammography screening

Mammography is the most efficacious method of diagnosing breast cancer, with an estimated ability to detect abnormalities between 60 and 95 percent.⁵ Results of

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Breast Cancer Quality Indicator

<i>Quality Indicator</i>	<i>Criterion Met or Acceptable Alternative</i>
1. The percentage of non-HMO female Medicare beneficiaries aged 52-69 (at the end of the time period) who have had a mammogram (screening or diagnostic) during a 2-year period.	1. Women who received Medicare-paid mammography during the time period. Each year's mammograms are based on Part B claims processed by March 31 of the following year.

Clinical Background (continued)

randomized controlled trials in the United States and Europe clearly indicate that use of regular screening mammography can reduce breast cancer mortality by 20 to 40 percent for women aged 50 years and over. Based on a meta-analysis of 13 studies reported from 1966 to 1993, it appears that judicious utilization of mammography can prevent approximately one-fourth of breast cancer deaths.⁶ Mortality from breast cancer is strongly associated with staging of the cancer.

Women whose cancer is detected at earlier stages have better prognoses. The five-year survival rate for women with localized disease is 97 percent.⁷ Survival rates drastically drop to 20 percent for women with distant metastases.

Consensus statements and guidelines

The main organizations and agencies that have developed clinical practice guidelines and recommendations concerning mammography utilization include the American Academy of Family Physicians (AAFP), American College of Obstetricians and Gynecologists (ACOG), American College of Radiology (ACR), American Cancer Society (ACS), American Medical Association (AMA), National Cancer Institute (NCI), and the U.S. Preventive Services Task Force (USPSTF). Additionally, ACOG published a Committee Opinion in 1994 stating that the obstetrician/gynecologist should be "fully educated" in breast disease and participate in screening programs and preventive strategies for breast cancer.⁸

The ACR, ACS, and AMA recommend annual mammograms for women over the age of 40. The NCI recommends mammograms every 1 to 2 years. The ACOG recommends mammograms every 1 to 2 years for women aged 40 to 49 and annual mammograms for women over age 50. Mammograms every 1 to 2 years are recommended by the USPSTF and AAFP for women aged 50 to 69. The USPSTF indicates that there is insufficient evidence to recommend for or against screening of women 70 years of age or older, although recommendations for this can be made on other grounds for women in this age category with a reasonable life expectancy.

Opportunity for Improvement

Although early detection has proven to reduce mortality resulting from the disease, mammography screening rates for the U.S. population are low, despite increases in mammography utilization over the past decade. Summary results of various studies indicate that only 30 to 60 percent of women over age 50 undergo routine mammography. Data from the 1992 National Health Interview Survey demonstrate that nearly 25 percent of the women in the study, aged 50 years and older, reported never having had a mammogram.

In an effort to coordinate national cancer prevention activities, the U.S. Department of Health and Human Services established the Healthy People 2000 program. Healthy People 2000 established national health promotion and disease prevention strategies to prevent and control cancer by the year 2000. Specific goals for mammography utilization are screening 60 percent of all women 50

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Opportunity for Improvement (continued)

years and older within a 2 year period by the turn of the century.⁹

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Diabetes

National Project Overview

Adult onset diabetes is highly prevalent in the Medicare population and over 150,000 Americans die each year from diabetes and its complications. Complications of the disease include blindness, kidney failure, nerve damage and cardiovascular disease. For most persons with diabetes, many of these complications can be prevented or delayed with appropriate monitoring and treatment. However, studies in both fee-for-service and managed care settings indicate that care is suboptimal. This project focuses on improving monitoring in the outpatient setting.



Public Health Importance

Diabetes is a major public health problem and is becoming more prevalent in all age groups. The increasing prevalence is attributed both to higher detection and to poorer health habits (increased rates of obesity being the primary culprit).

According to the National Health Interview Survey¹, the prevalence of Type II diabetes is 1.3 percent at 18-44 years, 6.2 percent at 45-64 years, and 10.4 percent for those aged 65 and older. Based on oral glucose testing in the National Health and Nutrition Examination Survey, there is one undiagnosed case of diabetes for every diagnosed case.

Individuals with diabetes have death rates twice that of the general U.S. population. They are also disproportionately affected by disability at rates 2 to 3 times higher than reported by individuals without diabetes (NHIS). In addition to the increased morbidity and mortality that

occur in individuals with diabetes, the financial costs to patients and to society are great. Individuals with diabetes have 2 to 5 times higher per capita total medical expenditures and per capita out-of-pocket expenditures than people without diabetes². Health care costs for diabetes have been estimated to be around \$92 billion in 1992 dollars.

Main Objective

To reduce rates of blindness, amputations, kidney failure and to reduce the rate of diabetes-associated cardiovascular disease that is the major cause of death for the elderly population with diabetes.

Process Objectives

The health care team working with the beneficiary with diabetes can play a major role in improving disease outcomes by providing appropriate medical care and

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Diabetes Quality Indicators

<i>Quality Indicators</i>	<i>Criterion Met or Acceptable Alternative</i>
1. Proportion of patients having annual hemoglobin A1c (HbA1c) monitoring	A claim record of an HbA1c test
2. Proportion of patients having a biennial lipid profile	A claim record of a lipid profile <i>or</i> the four individual components of a lipid profile (total cholesterol, high density lipoproteins, low density lipoproteins, and triglycerides) tested on the same day
3. Proportion of patients having a biennial eye exam	A claim record of an eye exam performed by an eye care professional or an eye procedure which also involves the examination of the retina

Process Objectives (continued)

monitoring and by supporting healthy lifestyle choices. Diabetes and the complications of the disease can be prevented or delayed by management of blood glucose through diet, exercise, and medication, by management of other risk factors such as lipids, blood pressure, smoking, and by appropriate and timely examinations and treatment (e.g., eyes and feet).

The short-term objectives for statewide improvement projects are to increase the rates of key examinations and laboratory tests. In optional projects, intermediate health outcomes (such as blood pressure control) will also be measured.

Clinical Background

A landmark study, the Diabetes Control and Complications Trial, established the benefits of intensive therapy to maintain glucose control for individuals with Type I diabetes.³ A second landmark study, the United Kingdom Prospective Study of Diabetes published in 1998, also established that similar benefits of intensive therapy occur for patients with Type II diabetes.² Based on these studies,

it is recommended that patients be monitored using hemoglobin HbA1c levels, a measure of glucose control over the past two to three months.

Persons with diabetes have a high rate of macrovascular disease and those with the disease have a high mortality rate. This complication of diabetes is thought to be due to a high level of risk factors such as lipids and to other biological factors intrinsic to diabetes. High lipid levels are modifiable risk factors and should be monitored. Getting a lipid profile is the first step in good lipid management.^{5,6}

Persons with diabetes also suffer from microvascular complications associated with the disease, and retinopathy is one of these complications. High HbA1c levels are linked to the development of retinopathy. Control of HbA1c levels and eye examinations which detect and allow appropriate treatment of retinopathy can, in many cases, prevent or greatly reduce visual impairment.⁷

Several organizations have published evidence based guidelines for screening, monitoring, and treatment of persons with diabetes. The American Diabetes Association's guidelines are updated annually and are available on its website, www.diabetes.org. The Depart-

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Clinical Background (continued)

ment of Veterans Affairs has published guidelines which are appropriate for the elderly population, since the average age of its diabetic patients is 64.

Opportunity for Improvement

The following are the median quality indicator baseline values from 19 Peer Review Organization projects performed during 1996 through 1999. With the exception of blood pressure monitoring, all of the indicators showed meaningful opportunity for improvement.

- HbA1c monitored, 59 percent
- Eye exam performed, 44.2 percent
- Lipid profile performed, 68.4 percent
- Blood pressure monitored, 89 percent
- Foot exam performed, 41.2 percent

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Heart Failure

National Project Overview

In January, 1999, the Health Care Financing Administration (HCFA) launched the National Heart Failure (NHF) project, a major effort to improve the care provided to Medicare patients with heart failure. This effort is one of six national topics under Medicare's Health Care Quality Improvement Program (HCQIP). Under the NHF component of the HCQIP program, Peer Review Organizations (PROs) in all states and territories will work with hospitals over three years to improve left ventricular function evaluation and appropriate use of ACEI in patients hospitalized with heart failure.



Public Health Importance

Heart failure is a uniquely appropriate target for quality improvement efforts. It is a common disease in the elderly, accounting for more hospital admissions than any other diagnosis in patients over the age of 65. The prevalence of heart failure appears to be rising as the population ages while mortality in heart failure declines. In addition, heart failure is associated with 20 to 30 percent one year mortality rates in the elderly and causes significant functional limitation¹. Estimates of annual expenditures on heart failure in the United States are astonishing, ranging from \$10 billion to \$40 billion.^{2,3}

Main Objective

To decrease the morbidity and mortality associated with heart failure in Medicare beneficiaries.

Process Objectives

- Increase the use of appropriate diagnostic tests to evaluate left ventricular systolic dysfunction (LVSD) in heart failure
- Increase the use of angiotensin-converting enzyme inhibitor (ACEI) for heart failure patients with an ejection fraction (EF) less than 40 percent

Clinical Background

The cornerstone of proper medical treatment is the prescription of an angiotensin-converting enzyme inhibitor (ACEI) in patients with heart failure due to left ventricular systolic dysfunction. This practice recommendation has been defined in guidelines issued by two groups: the Agency for Health Care Policy and Research (AHCPR), and a joint committee of the American Heart Association and the American College of Cardiology (AHA/ACC).⁴

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Heart Failure Quality Indicators

<i>Quality Indicators</i>	<i>Descriptions</i>
1	Appropriate use/non-use of ACEI at discharge (excluding discharges on ARB* but not ACEI)
2	Discharges not admitted on ACEI or ARB with EF evaluated before or during admission
3	Discharges not admitted on ACEI or ARB with documented LVSD who are discharged on ACEI <i>or</i> have documented reason for not being on ACEI or have a contraindication to ACEI (excluding discharges on ARB but not ACEI)
<i>Test Indicators</i>	<i>Descriptions</i>
1	Appropriate use/non-use of ACEI or ARB at discharge
2	Discharges not admitted on ACEI or ARB with documented LVSD who are discharged on ACEI or ARB <i>or</i> have documented reason for not being on ACEI or ARB
3	Appropriate discharge instructions (smoking cessation, discharge medications, weight monitoring, diet, activity level, follow-up appointment, what to do if symptoms worsen)
4	Weight monitoring during hospitalization
5	Admission on beta blockers for those with documented LVSD and a history of heart failure
6	Follow-up provider visit within 4 weeks of discharge
7	Aspirin, other antiplatelet agent, or warfarin for history or current diagnosis of coronary artery disease
8	ACEI dosing – at least 50 percent of target dose based on doses shown effective in clinical trials

Key to abbreviations:

ACEI – Angiotensin-Converting Enzyme Inhibitor
 LVF – Left Ventricular Function
 LVSD – Left Ventricular Systolic Dysfunction
 ARB – Angiotensin-II Receptor Blocker

* While preliminary data (Pitt, Segal, et al. 1997 ID: 13) are suggestive, the effects of ARBs on mortality and their equivalence or superiority to ACEIs are unknown. Despite this fact, our preliminary data suggests that 10 to 15 percent of elderly heart failure patients are currently receiving one of them in place of an ACEI.

Opportunity for Improvement

A variety of surveys published between the late 1980s and the mid 1990s demonstrated ACEI prescription rates between 36 and 40 percent.⁵ More recent surveys suggest this rate may have risen to over 70 percent,⁶ but this still represents a level open to significant improvement.

Although data are sparse in the elderly population, ACEI prescription in the elderly might lower mortality by 25 to 33 percent, improves functional capacity and quality of life, and results in cost savings.⁷ Despite strong, solid evidence supporting these guidelines, available data suggests that these guidelines are not followed in a significant percentage of cases.⁸

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Pneumonia

National Project Overview

Pneumonia and influenza cause substantial morbidity and mortality for Medicare patients. Opportunities to improve care for these conditions have been documented. This project focuses on changing processes of care designed to improve outcomes for Medicare beneficiaries admitted to the hospital with pneumonia. In addition, an objective of this project is to increase rates of vaccination against influenza and pneumococcal disease.



Public Health Importance

Pneumonia and influenza are the sixth leading causes of death in the United States.¹ Approximately 600,000 Medicare patients are hospitalized utilizing more than 4.2 million inpatient days each year.² In 1993, more than \$3.5 billion was spent on inpatient care of Medicare patients with pneumonia.³ Pneumonia is also the principal reason for more than 500,000 emergency department visits by Medicare patients each year.² The incidence of pneumonia increases with age, and approximately 90 percent of deaths due to this condition are in the population aged 65 and older.^{1,4,5}

Main Objective

To decrease the morbidity and mortality associated with community-acquired pneumonia in Medicare beneficiaries.

Process Objectives

- Increase the number of inpatients who receive timely antibiotic administration
- Increase the use of initial antibiotic therapy consistent with current guidelines
- Increase the collection of blood cultures prior to the initial antibiotic dose
- Increase the number of hospitalized patients who are screened for or given pneumococcal and influenza vaccines
- Increase state wide immunization rates for pneumococcal and influenza vaccines

Clinical Background

Based on a review of medical evidence by an expert panel, the following considerations guided the development of quality indicators:

Continued

Pneumonia Quality Indicators

<i>Quality Indicators</i>	<i>Criterion Met or Acceptable Alternative</i>
1. Proportion of patients who receive the initial antibiotic dose within 8 hours of hospital arrival	Time from initial presentation to any antibiotic administration within 8 hours
2. Proportion of patients given an initial antibiotic consistent with current recommendations	<p>Non-ICU Admission:</p> <p>β-lactam* monotherapy (IV)</p> <p>β-lactam (IV) + macrolide† (IV or PO)</p> <p>Quinolone‡ monotherapy (IV or PO)</p> <p>ICU Admission:</p> <p>β-lactam* (IV) + macrolide† (IV)</p> <p>β-lactam* (IV) + quinolone‡ (IV)</p> <p>If documented β-lactam allergy:</p> <p>Quinolone‡ + Clindamycin (IV)</p> <p>Quinolone‡ + Vancomycin (IV)</p>
3. Proportion of patients who have blood cultures collected before antibiotics administered	Documentation that blood culture collected before the date and time of administration of the initial antibiotic dose in those patients for whom blood cultures are ordered
4. Proportion of inpatients with pneumonia screened for or given influenza vaccination	Documentation of screening or administration of vaccine for hospital discharges during the months of October through December
5. Proportion of inpatients with pneumonia screened for or given pneumococcal vaccination	Documentation of screening or administration of vaccine
6. Statewide influenza vaccination rate	Received vaccine
7. Statewide pneumococcal vaccination rate	Received vaccine

* β-lactams – cefuroxime (Kefurox, Zinacef); ceftriaxone (Rocephin); cefotaxime (Claforan); cefepime (Maxipime); ampicillin-sulbactam (Unasyn); piperacillin-tazobactam (Zosyn); imipenem-cilastatin (Primaxin); Meropenem (Merrem)

† Macrolides – erythromycin; clarithromycin (Biaxin); or azithromycin (Zithromax)

‡ Quinolones – ciprofloxacin (Cipro); ofloxacin (Floxin); levofloxacin (Levaquin); grepafloxacin (Raxar)**; lomefloxacin (Maxaquin); sparfloxacin (Zagam) trovafloxacin (Trovan)***; gatifloxacin (Tequin); moxifloxacin (Avelox)

** Glaxo Wellcome announced voluntary withdrawal from market, October 27, 1999, *FDA MedWatch*, however, this antibiotic is not removed from this list since it was in use during the baseline measurement period.

*** Food and Drug Administration issued public health advisory, June 9, 1999, *FDA MedWatch*, concerning associated liver toxicity. Trovan continues to be approved for patients meeting treatment criteria.

Clinical Background (continued)

The relationship between early antibiotic administration and lower 30-day mortality rate.

Previous studies evaluating the impact of changing processes of care including the administration of antibiotics within 4 hours of hospital admission for patients with community-acquired pneumonia have demonstrated this relationship.^{6,7} Most recently, data from the Medicare Quality Indicator System (MQIS) pneumonia module revealed a 15 percent lower odds of 30-day mortality when antibiotics were administered within 8 hours of hospital arrival.⁸

The association between blood cultures and a lower 30-day mortality rate.

Data from the MQIS pneumonia module demonstrated the association between blood cultures within 24 hours of hospital arrival and a lower 30-day mortality rate.⁸ Routine blood cultures are recommended in guidelines for management of community-acquired pneumonia from the American Thoracic Society (ATS)⁹ and the Infectious Diseases Society of America (IDSA).¹⁰ The emergence of antibiotic-resistant strains of *Streptococcus pneumoniae* and the need for pathogen-directed antimicrobial therapy emphasize the need for routine cultures.¹⁰

Empiric antibiotic selection to provide appropriate coverage for *Streptococcus pneumoniae* and to cover atypical organisms in patients who require admission to an intensive care unit.

Streptococcus pneumoniae represents the most common cause of community-acquired pneumonia and accounts for approximately two-thirds of cases of bacteremic pneumonia.¹¹ Both *Streptococcus pneumoniae* and *Legionella* species^{12,13} are important causes of lethal pneumonia in seriously ill patients. Analysis of outcomes for patients in the MQIS pneumonia module demonstrated significant reductions in mortality for patients treated with antibiotic combinations that were effective against both pneumococcus and atypical organisms.¹⁴ In addition, the incidence of penicillin-resistant strains of pneumococcus has increased during the past decade.^{15,16} Empiric antibiotic therapy to cover potentially resistant strains of *Streptococcus pneumoniae* and atypical organisms for patients admitted to the intensive care unit is recommended.¹⁰

Prevention of Pneumococcal Disease and Influenza

In spite of the fact that influenza and pneumococcal vaccines are effective¹⁷⁻²⁰ and are Medicare Part B covered benefits, they remain underutilized.²¹ Strategies for immunization that include the recommendation for vaccination of outpatients and of inpatients prior to hospital discharge have been suggested.²¹⁻²⁵

Guidelines for the management of community-acquired pneumonia were published in 1993 by the ATS,⁹ the British Thoracic Society,²⁶ and the Canadian Infectious Disease Society.²⁷ In 1998, the Infectious Diseases Society of America (IDSA) published an evidence-based guideline for the management of community-acquired pneumonia in immunocompetent adults.¹⁰ Revisions to the ATS and the IDSA guidelines are currently being finalized by both organizations. Recommendations for adult immunization with influenza and pneumococcal vaccines have been published by the Advisory Committee on Immunization Practices (ACIP).²¹⁻²³

Opportunity for Improvement

Data from the MQIS pneumonia module demonstrated that up to 25 percent of patients admitted to the hospital with community-acquired pneumonia did not receive antibiotics within 8 hours of hospital arrival.⁸ Nearly half of these patients did not have blood cultures collected before the administration of antibiotics.⁸ Analysis of both Medicare claims and survey data have demonstrated underuse of influenza and pneumococcal vaccines.²⁰

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Stroke

National Project Overview

Strokes cause substantial morbidity and mortality for Medicare patients. Opportunities to improve stroke prevention and acute care processes have been documented related to atrial fibrillation, acute ischemic stroke and carotid endarterectomy. This project focuses on changing processes of care, such as pharmacological interventions and monitoring, timely and appropriate diagnostic testing, and risk factor identification and education in these three clinical areas.



Public Health Importance

Stroke is reported to be the third leading cause of death in the United States, as well as a leading cause of serious, long-term disability. Approximately 600,000 new strokes are documented annually in the United States, and it has been estimated that carotid artery disease may be responsible for 20 to 30 percent of them. For people over age 55, the incidence of stroke more than doubles in each successive decade. About 29 percent of people who have an initial stroke die within a year. This percentage is higher among people age 65 and older. Among the risk factors for Transient Ischemic Attack (TIA) or stroke, the most important is a prior TIA or stroke, either of which carries a tenfold increase in risk. In addition, the presence of atrial fibrillation represents an increase in risk by 6 times.

Data for Americans aged 40 and older showed the average in-hospital and physician costs were \$11,010 for a stroke and \$4,940 for TIA in 1995. According to data from the Health Care Financing Administration, \$3.7 billion, or about \$5,718 per discharge, was paid for Medicare beneficiaries with stroke in 1995. Researchers supported by the Agency

for Health Care Policy and Research found that expanded use of warfarin could reduce by half the 80,000 strokes each year due to atrial fibrillation and estimated that proper anticoagulation therapy could save approximately \$600 million annually.²⁰

Main Objective

To decrease the morbidity/mortality rate related to stroke by improving quality of care for patients with

- atrial fibrillation
- TIA/ischemic stroke
- carotid endarterectomy (CEA)

Process Objectives

- Increase the use of antithrombotics for primary and secondary stroke prophylaxis
- Decrease the use of sublingual nifedipine in patients with TIA/ischemic stroke

Continued

Stroke Quality Indicators

Descriptions

Quality Indicator: Atrial Fibrillation

- | | |
|---|--|
| 1. Proportion of eligible discharges without contraindications who are prescribed warfarin at discharge | 1. Documentation of warfarin prescribed at discharge or a plan for warfarin after discharge for patients discharged in atrial fibrillation or who have intermittent atrial fibrillation that do not have contraindications to warfarin |
|---|--|

Test Indicators: Atrial Fibrillation

- | | |
|--|--|
| 1. Echocardiogram for new onset atrial fibrillation | 1. Documentation of echocardiogram performed within one year prior to the hospitalization, during the hospitalization or planned following hospitalization for patients with new onset atrial fibrillation |
| 2. Thyroid lab test for new onset atrial fibrillation | 2. Documentation of thyroid lab testing within 24 hours prior to arrival or during hospitalization for patients with new onset atrial fibrillation |
| 3. Patient/family/caregiver education regarding warfarin at discharge | 3. Documentation of patient/family/caregiver education regarding warfarin at discharge for patients discharged on warfarin or with a plan for warfarin after discharge |
| 4. Planned follow-up Prothrombin Time (PT)/ International Normalized Ratio (INR) | 4. Documentation of planned follow-up PT/INR for patients discharged on warfarin |

Quality Indicators: Transient Ischemic Attack (TIA)/Ischemic Stroke

- | | |
|---|--|
| 1. Antithrombotic prescribed at discharge | 1. Documentation of an antithrombotic prescribed at discharge or a plan for an antithrombotic after discharge for patients with TIA/stroke that do not have contraindications to antithrombotics |
| 2. Avoidance of sublingual nifedipine in patients with acute stroke | 2. No documentation of administration or an order for sublingual nifedipine in patients with acute stroke and elevated blood pressure (>180 mmHg systolic or >100mmHg diastolic) during the first 24 hours following arrival |

Continued next page

Stroke Quality Indicators (continued)

Descriptions

Test Indicators: Transient Ischemic Attack (TIA)/Ischemic Stroke	
1. Documentation of time of symptom onset (or interval)	1. Documentation of: a time (or interval) of symptom onset; non-recent symptoms; or inability to determine time of symptom onset for patients with stroke
2. CT/MRI during hospitalization	2. CT/MRI during hospitalization for stroke patients not receiving terminal/comfort care on admission
3. Time to initial head CT/MRI	3. Time to initial head CT/MRI for stroke patients not receiving terminal/comfort care on admission
4. Time to thrombolytic administration	4. Time to thrombolytic administration for all patients who received a thrombolytic
5. Thrombolytic patients meeting recommended dosing, timing, imaging and blood pressure parameters a. Patients with adequate information documented regarding dosing, timing, imaging and blood pressure b. Of patients with information documented, those that meet recommended dosing, timing, imaging and blood pressure parameters c. Of all patients receiving thrombolytics, those with adequate information documented that met recommended dosing, timing, imaging and blood pressure parameters	5. Thrombolytic patients meeting recommended dosing, timing, imaging and blood pressure parameters a. Of stroke patients receiving thrombolytics, those with the following documented: a thrombolytic dose, date and time of administration; a date and time of symptom onset; a date and time of arrival; a date and time of CT or MRI; and blood pressure readings prior to TPA administration. b. Of patients with information documented, those that meet the following recommendations: total thrombolytic dose not greater than 90 mg; administration of TPA within 3 hours of symptom onset; imaging completed prior to thrombolytic administration; pretreatment systolic blood pressure not greater than 185 mmHg and pretreatment diastolic blood pressure not greater than 110 mmHg c. Of all patients receiving thrombolytics, those with adequate information documented that meet recommended dosing, timing, imaging and blood pressure parameters as defined in Test Indicator 5b
6. Deep vein thrombosis (DVT) prophylaxis initiated by second hospital day	6. Documentation of DVT prophylaxis initiated by second hospital day for patients whose activity level is bedrest on the second hospital day

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Stroke Quality Indicators (continued)

Descriptions

Quality Indicator: Carotid Endarterectomy (CEA)	
1. Stroke/mortality (30 day) in patients with CEA	1. Stroke/mortality rates at 30 days post-CEA in patients with CEA
Test Indicator: Carotid Endarterectomy (CEA)	
1. Perioperative antiplatelet administration	1. Documentation of perioperative antiplatelet administration

Process Objectives (continued)

- Increase appropriate diagnostic testing
- Increase patient/family/caregiver education regarding anticoagulation and planned INR/prothombin time
- Increase knowledge and appropriate use of thrombolytic therapy in acute stroke
- Increase use of deep venous thrombosis (DVT) prophylaxis in patients with stroke

Clinical Background

Atrial Fibrillation

The strongest epidemiological evidence for atrial fibrillation as an independent risk factor for stroke emerged from the Framingham study.² The same study defined the risk factors for development of atrial fibrillation. They are, in men, congestive heart failure, age, valve disease, hypertension, diabetes and myocardial infarction (in decreasing value of the odds ratio). These same factors, in the same order, exist for women except for myocardial infarction.³ While valvular heart disease is a recognized cause of atrial fibrillation, the majority of elderly patients with strokes associated with this arrhythmia have nonvalvular atrial fibrillation.⁴

Recommendations on Warfarin

● Clinical Trials

Starting in 1989 and continuing through 1994, the results of six major clinical trials were published, all showing the usefulness of anticoagulation, specifically with warfarin, in reducing the risk of stroke in patients with nonvalvular atrial fibrillation.⁵⁻¹¹ To summarize these studies, the relative risk reduction varied from 52 percent to 86 percent, and all were statistically significant reductions. A meta-analysis of five of the studies dealing with primary prevention was published in 1994,¹² and reported that the annual stroke rate was 4.5 percent in control groups and 1.4 percent in warfarin groups. This was a risk reduction of 68 percent. Warfarin was efficacious across all subgroups of patients.

● Consensus Statements and Guidelines

Based on these findings, consensus statements and/or guidelines were published by the American College of Chest Physicians in 1998,¹³ the American Heart Association (AHA) Subcommittee on Electrocardiography and Electrophysiology in 1996,¹⁴ and the American Academy of Neurology in 1998.^{39,40} Recently, a review of stroke prevention guidelines combined with a multidisciplinary consensus statement was published by the National Stroke Association with the goal of establishing, in a single resource, up-to-date recommendations for primary care physicians regarding prevention strategies for a first stroke.¹⁵

Continued next page

Clinical Background (continued)

Patient/Family/Caregiver Education Regarding Warfarin/Planned Prothrombin Time

A recent study by Hylek designed to test the lowest effective level of prophylactic anticoagulation found that among patients with atrial fibrillation, INRs of 2.0 or greater are effective.²³ Because the risk of hemorrhage rises rapidly at INRs greater than 4.0 to 5.0, the role of tight control of anticoagulant therapy to maintain the INRs between 2.0 and 3.0 is clear. This role is especially important in the more elderly patient because consistent prothrombin times are difficult to maintain due to erratic food intake, instability of coexisting illness, multiple medications and confusing regimens.²⁴ Education regarding warfarin dosing, dietary intake of vitamin K, the use of alcohol, common drug interactions, avoidance of falls, and the importance of regular prothrombin level checks should be a basic part of discharge planning for these patients. In addition, an appointment for an INR/prothrombin level check should be made prior to discharge.

Echocardiograms for New Onset Atrial Fibrillation

Valvular heart disease is a well-documented cause of atrial fibrillation. In addition, valvular heart disease in combination with atrial fibrillation increases the risk for thromboembolism and stroke. Patients with valvular disease and an atrial thrombus may require more intensive antithrombotic therapy and closer monitoring.¹⁴ Occasionally, surgical valve replacement may be needed to stabilize cardiac function. The performance of echocardiography permits the identification of valvular disease and may detect an atrial thrombus. If these high risk patients are promptly identified, physicians can approach them with the necessary higher level of care.

Thyroid Testing for New Onset Atrial Fibrillation

Hyperthyroidism should always be considered for patients when atrial fibrillation occurs without apparent cardiac origin, especially if the ventricular response is rapid.²⁷ In older patients with diagnosed hyperthyroidism, atrial fibrillation is a common clinical finding^{28,29,30} and low TSH has been shown to be a risk factor for development of

atrial fibrillation.³¹ Most physicians who care for these patients favor routine testing for thyroid function for elderly patients with atrial fibrillation.³²

Stroke

Stroke includes various disorders that lead to the destruction of brain tissue, functional disability, and often death. The majority of strokes are ischemic with approximately 30 percent resulting from atherothrombosis in extracranial and larger intracranial vessels and another 20 to 25 percent from cardiac emboli due to atrial fibrillation or myocardial infarction.²⁰ Therapeutic interventions directed at general, modifiable risk factors for stroke such as hypertension, heart disease, smoking, diabetes and hyperlipidemia should be part of any effort to reduce the risk for stroke. In addition, several conditions are associated with a higher risk for stroke and are potentially responsive to medical or surgical treatment, including carotid artery stenosis, atrial fibrillation and previous TIA or stroke.⁴⁵

Rapid-acting Antihypertensives

The use of rapid-acting antihypertensives with acute ischemic stroke is addressed in the 1994 AHA Guidelines for the Management of Acute Ischemic Stroke.²¹ The authors warn against the sublingual use of a calcium antagonist due to its rapid absorption and the possibility of a secondary precipitous drop in blood pressure which could cause further tissue damage.²¹ According to Grossman et al., the use of nifedipine capsules for hypertensive emergencies and pseudoemergencies should be abandoned based on reports of cerebrovascular ischemia and stroke and numerous instances of severe hypotension, acute myocardial infarction, conduction disturbances, and death.²²

Time to Initial CT/MRI

Definitive guidelines from the Stroke Council of the American College of Cardiology and the AHA have been developed for the use of brain imaging studies in acute stroke patients. These were updated in 1997.²⁵ Rapid use of computed tomography (CT) of the brain provides a means of effectively discriminating between ischemic and hemorrhagic stroke, an important initial step because the

Continued next page

Clinical Background (continued)

clinical signs and symptoms are similar while the therapy is quite different.²¹ CT scans can also identify nonvascular lesions such as brain tumors which can produce focal neurological signs. Though this non-invasive test can miss a subtle subarachnoid hemorrhage, the effectiveness of early CT in detecting intracerebral hemorrhage is almost 100 percent.²¹ CT of the head also has a role in the evaluation of patients with TIA, traditionally thought to represent reversible ischemia without infarction, because it may detect a cerebral infarction with short-lived symptoms.²⁶ In contrast, magnetic resonance imaging (MRI) is more sensitive than CT for detection of cerebral ischemic infarction within the first 24 hours of onset, for early documentation of hemorrhagic infarction, and for early detection of post-infarction brain edema and mass effect. Its limitations include higher cost, less availability, decreased resolution of early intracranial hemorrhage compared to CT, and claustrophobic reactions.²⁶

Thrombolytic Therapy

The possibility of thrombolytic therapy for stroke is highly attractive but countered by the potential for intracerebral hemorrhage in the ischemic area or elsewhere in the brain. Three large multicenter clinical trials, the National Institute of Neurological Disorders and Stroke rt-PA Stroke Study Group (NINDS), the European Cooperative Acute Stroke Study (ECASS) and ECASS II were published between 1995 and 1998.⁴¹⁻⁴³ Results from each study generally showed that outcomes improved with thrombolytic therapy. While there was a higher incidence of symptomatic hemorrhage in the treatment arm of each study depending on how rigorously the patients were selected and what dose of thrombolytic was used, the overall outcome benefit outweighed the increased risk of stroke.

A Practice Advisory was published as an addendum to the American Heart Association Guidelines on stroke management⁴⁴ which recommended the use of the thrombolytic therapy selection criteria for patients from the NINDS study.⁴¹ The Practice Advisory also recommended the use of the treatment protocol from that study.

Carotid Endarterectomy

Carotid endarterectomy, a surgical procedure that removes atherosclerotic plaque from the wall of the carotid artery as a preventive measure to lower the risk of ischemic strokes, was introduced in 1954. Although the first clinical trials of its effectiveness had equivocal results, surgeons continued to perform it due to its perceived value as a prophylaxis against a stroke; gradually, lower perioperative complications have been reported.³⁶ Several recent randomized clinical studies have proven the efficacy of CEA in reducing the risk of a stroke in both symptomatic and asymptomatic patients with proven carotid stenosis, when the procedures are performed at facilities with less than 5 percent morbidity/mortality rates.³³⁻³⁶ Complications following this procedure include strokes, TIA, optic emboli, cranial nerve damage, myocardial infarction, congestive heart failure, cardiac arrest, and/or death.

Opportunity for Improvement

Warfarin is underutilized in patients with atrial fibrillation in the acute care setting:

- At 6 university hospitals, of a cohort of 134 patients with atrial fibrillation and no contraindications to warfarin, 44 percent were discharged on the drug.¹⁶ This same group studied patients with atrial fibrillation admitted for stroke. Even in this setting of tertiary prevention, only 47 percent of the survivors were discharged on warfarin. Also noted was inadequate monitoring of anticoagulation prior to admission.¹⁷
- In a study based at 2 teaching hospitals and 5 community hospitals, only 37 percent of eligible patients received warfarin. Increasing risk factors for stroke, including age older than 75 years, were associated with decreased use of warfarin.¹⁸
- In a study of patients with chronic atrial fibrillation of all causes, only 34 percent were treated with warfarin. This analysis showed lower rates in older patients and patients treated in community rather than tertiary care hospitals.¹⁹

There is evidence that focused quality improvement efforts can reduce unacceptably high morbidity/mortality

Continued next page

Opportunity for Improvement (continued)

associated with CEA in an individual facility or community:

- A follow-up study by Till et al.³⁷ revisited the 30 day CEA complication rates for Wake Forest University Medical Center that had been documented as high as 16 percent morbidity and 6 percent mortalities in 1978 to determine if quality improvement efforts had made a difference. The study showed that the combined morbidity rate for both asymptomatic and symptomatic carotid stenosis was lowered to 2 percent and a mortality rate to 2.3 percent after initiation of a stroke research center, use of a stroke registry to audit management results, improved case selection, use of the most skilled and experienced surgeons, and use of regional anesthesia as an intraoperative monitoring device.
- A study by Mattos et al.³⁸ to evaluate and update the results of CEA in two community hospitals over more than 17 years revealed that the unacceptably high complication rates (combined stroke/mortality rates of 21.1 percent) found in 1976 had been significantly reduced (to 6.3 percent) through quality improvement efforts. The authors point out that even though the complication rates were much lower, they were still not optimal due to the large variation in surgical experience found among their surgeons' population.

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Reducing Health Care Disparities

National Project Overview

Reducing health care disparities is one of the major challenges facing the entire health care industry. Compelling evidence exists that race and ethnicity correlate with persistent, and often increasing, health disparities. This project focuses on working at the state level to reduce health care disparities.



Public Health Importance

Since 1993, key indicators have shown that our nation's health has greatly improved. However, this good news does not apply to all Americans, a fact that has been recognized by leading organizations and health care researchers across the United States.

Elderly women constitute most of the new cases and deaths from breast cancer, and elderly minority women bear the largest brunt of the disease.¹ Elderly African-American women are less likely to have had a mammogram than their white peers, despite Medicare reimbursement for the service.² Hispanic women are also less likely to be screened for breast cancer than white women.³

Coronary heart disease is the leading cause of death for African-Americans in the U.S.⁴ In spite of their higher mortality and morbidity for cardiovascular disease, African-Americans and Hispanics are less likely to undergo treatment for their conditions.⁵

Diabetes kills African-Americans at more than three times the rate for whites. It kills American Indian/Alaska Natives at more than twice the rate and Hispanics at more than one and one-half times the rate for whites.⁵

In 1996, influenza and pneumonia were the fifth leading cause of death among persons 65 years of age and older. Among the Medicare population, non-Hispanic whites were more likely to report receipt of influenza and pneumococcal vaccines than Hispanics and non-Hispanic blacks.⁶

The low-income population with dual Medicare and Medicaid coverage is particularly vulnerable to greater health disparities in contrast to other Medicare beneficiaries.⁷

Achieving new health care goals will require a major commitment to identify and to address the causes underlying higher levels of disease and disability in racial and ethnic groups. The urgent need for this commitment is further emphasized by the fact that the overall population

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Public Health Importance (continued)

is expected to grow dramatically, especially Hispanics, Asians and the minority elderly over age 85.

Objectives

- To improve health status and outcomes in racial and ethnic populations.
- To reduce the disparity between health care received by beneficiaries who are members of a targeted racial and ethnic group and all other beneficiaries living in each state.

Defined Populations

The targeted groups for these local projects are African-Americans, Hispanics, American Indians and Alaskan Natives, Asians and Pacific Islanders, and Medicare beneficiaries who are dually eligible for Medicaid benefits.

Opportunity for Improvement

Eliminating disparities among racial and ethnic groups present very different challenges. In some areas, such as immunizations, we are cognizant of what will help to eliminate the disparities. In others, where knowledge about how to reduce these disparities is less developed, there is a need to understand the causes and to find more effective methods to reach individuals and communities that have not benefitted from established interventions. Thus, our opportunity for improving the health status of racial and ethnic groups will require working more closely with communities to identify culturally-sensitive implementation strategies.

Eliminating racial and ethnic disparities in health will require enhanced efforts at preventing disease, promoting health and delivering appropriate care. This will necessitate improved collection and use of standardized data to cor-

rectly identify high risk populations and monitor the effectiveness of health interventions targeting these groups. Testing hypotheses to better understand the relationships among socioeconomic variables, health status and quality improvement strategies for different racial and ethnic minorities will help us to advance our knowledge and to foster improvement. These insights will support our existing efforts to eliminate health care disparities and develop new ways to apply proven intervention strategies.

Reaching our national goal of eliminating racial and ethnic disparities in health by the year 2010 will require the combined efforts of the state Peer Review Organization, local agencies, and community organizations.

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Quality Indicators for Medicare's Health Care Quality Improvement Program

<i>Clinical Topic</i>	<i>Quality Indicators</i> (proportion of Medicare beneficiaries receiving)	<i>Data Sources</i>
<i>Acute Myocardial Infarction</i>	<ol style="list-style-type: none"> 1. Early administration of aspirin 2. Early administration of beta-blocker 3. Timely reperfusion 4. Aspirin at discharge 5. Beta-blocker at discharge 6. ACEI at discharge for low left ventricular ejection fraction 7. Smoking cessation counseling during hospitalization 	Hospital medical records for AMI patients
<i>Breast Cancer</i>	<ol style="list-style-type: none"> 8. Biennial mammography screening 	Medicare claims (bills) for all female beneficiaries
<i>Diabetes</i>	<ol style="list-style-type: none"> 9. Biennial retinal exam by an eye professional 10. Annual HbA1c testing 11. Biennial lipid profile 	Medicare claims (bills) for all diabetic beneficiaries
<i>Heart Failure</i>	<ol style="list-style-type: none"> 12. Appropriate use/non-use of ACEI at discharge (excluding discharges on ARB) 	Hospital medical records for heart failure patients
<i>Pneumonia</i>	<ol style="list-style-type: none"> 13. Influenza vaccinations 14. Pneumococcal vaccinations 15. Blood culture before antibiotics are administered 16. Appropriate initial empiric antibiotic selection 17. Initial antibiotic dose within 8 hours of hospital arrival 18. Influenza vaccination or appropriate screening 19. Pneumococcal vaccination or appropriate screening 	<ol style="list-style-type: none"> 13-14 CDC's Behavioral Risk Factor Surveillance System (BRFSS) data 15-19 Hospital medical records for pneumonia patients
<i>Stroke</i>	<ol style="list-style-type: none"> 20. Discharged on antithrombotic (acute stroke or TIA) 21. Discharged on warfarin (atrial fibrillation) 22. Avoidance of sublingual nifedipine (acute stroke) 	Hospital medical records for stroke, TIA, and chronic atrial fibrillation patients

Key to abbreviations:

ACEI – Angiotensin-Converting Enzyme Inhibitor
 AMI – Acute Myocardial Infarction
 ARB – Angiotensin-II Receptor Blocker
 CDC – Centers for Disease Control and Prevention
 HbA1c – Hemoglobin A1c
 TIA – Transient Ischemic Attack